

CLAIMS:

1. A process for the production of sterically hindered amino ether alcohols, diaminopolyalkenyl ethers, and mixtures thereof, comprising reacting an alkyl substituted primary amino compound with a polyalkenyl ether glycol, over a catalyst comprising a catalytically active metal on a support, the support characterized by a micropore volume above about 0.5 cm³/g, the metal loaded catalyst exhibiting a pore size distribution when normalized for pore of 19.99 nm or less of about 30% or more of pores of up to 4.99 nm, the pores of 5 to up to 19.99 nm constituting the balance.

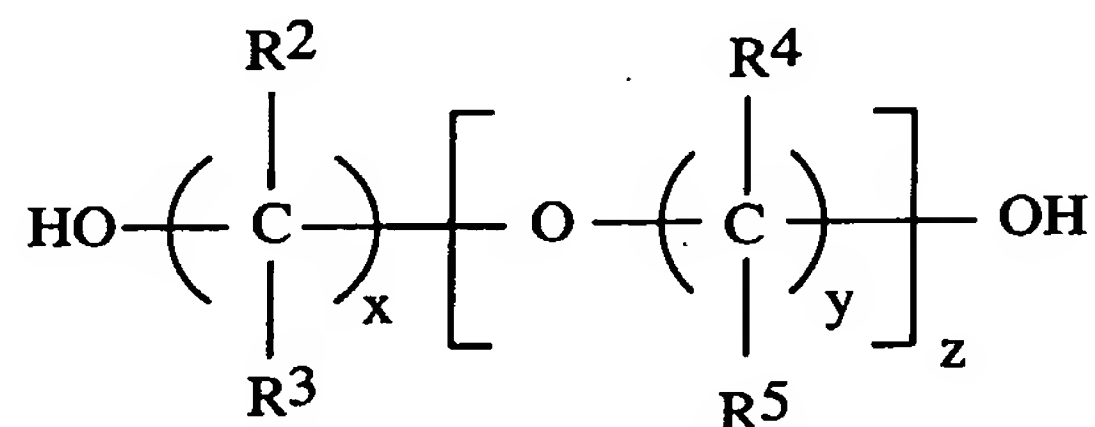
2. The process of claim 1 wherein the catalyst has a BET surface area of greater than 50 m²/g.

3. The process of any one of the preceding claims wherein the primary amine to glycol ratio is in the range of about 10:1 to 0.5:1.

4. The process of any one of the preceding claims wherein the primary amine compound is of the general formula



wherein R¹ is selected from the group consisting of secondary- and tertiary-alkyl radicals having 3 to 8 carbon atoms, cycloalkyl radicals having 3 to 8 carbon atoms, and mixtures thereof, and the polyalkenyl glycol is of the general formula



wherein R², R³, R⁴ and R⁵ are each independently selected from the group consisting of hydrogen, C1-C4 alkyl radicals, and C3-C8 cycloalkyl radicals with the process that if the carbon atom of R¹ directly attached to the nitrogen

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atoms is a secondary alkyl radical, at least one of R^2 and R^3 directly bonded to the carbon which is bonded to the hydroxyl group is an alkyl or cycloalkyl radical, x and y are each positive integers independently ranging from 2 to 4, z is from 1 to 10 and the ratio of alkyl substituted primary amine to glycol is less than 2:1 when z is greater than 1.

5. The process of any one of the preceding claims wherein the initial hydrogen pressure at room temperature is from about zero to about 300 psig, the temperature is about 150°C to about 350°C, total reactor pressure at operating temperature is from 50 to 1,500 psig, and reactor time is from 0.5 to 24 hours.

6. The process of any one of the preceding claims wherein the catalyst comprises about 2.5 to about 80% reduced metal based on the whole reduced catalyst.

7. The process of any one of the preceding claims wherein the catalytically active metal is nickel.

8. The process of any one of the preceding claims wherein the catalyst support comprises mesoporous materials wherein the mesoporous material is selected from the group comprising M41-S materials.

9. The process of any one of the preceding claims wherein the support material comprises MCM-41.

10. The process of any one of the preceding claims wherein the catalyst comprises at least about 10% reduced nickel based on the whole reduced catalyst deposited on a support and characterized by having a BET surface area above 50 m²/g, a micropore volume above about 0.05 cm³/g, the metal loaded catalyst exhibiting a pore size distribution, when normalized for pore of 19.99 nm and less of about 30% or more of pores of up to 4.99 nm, the pore of 5 to up

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to about 19.99 nm constituting the balance, the alkyl substituted primary amine is selected from the group consisting of isopropyl amine, tertiary-butyl amine, 1-methyl-1-ethyl propyl amine and tertiary-amyl amine, the glycol is selected from the group consisting of diethylene glycol, triethylene glycol, di-isopropylene glycol, the ratio of amine to glycol ranges from about 10:1 to 0.5:1, initial hydrogen pressure at room temperature ranges from zero to 300 psig, temperature range from about 150°C to 350°C, total reactor pressure at operating temperature ranges from about 50 to 1,000 psig, and time ranges from about 0.5 to 24 hours.

11. The process of any one of the preceding claims wherein the primary amine is tertiary-butyl amine the polyalkenyl glycol is diethylene glycol, the ratio of amine to glycol ranges from about 3:1 to 1:1, the catalytically active metal is nickel present in an amount in the range of about 10 to about 65 wt% reduced nickel based on the whole reduced catalyst, temperature is in the range of about 160°C to about 300°C, reaction time is in the range of about 1 to 12 hours, and the metal loaded catalyst has a pore size distribution of about 35-100% of pores of up to 4.99 nm, and pores of 5.0 to up to about 19.99 nm constituting the balance, when the pore size distribution is normalized for 19.99 nm and less.

12. The process of any one of the preceding claims wherein the amount of catalyst present with respect to the total amount of reactant is in the range of from about 0.001 to about 10 wt% catalyst based on the weight of the total reactant charge.